



ABSTRACT

Monoclonal antibodies that bind to a human cell surface receptor 4-1BB polypeptide are provided. The human cell surface receptor 4-1BB polypeptide may consist of amino acids 1-163 of SEQ ID NO:8. The monoclonal antibody may be isolated, of IgG1 isotype, and/or raised against human 4-1BB/F_c fusion protein. The monoclonal antibody may be antagonistic or agonistic. The monoclonal antibody may bind to endogenous human 4-1BB cell surface receptor on activated primary T-cells, the alloreactive CD4⁺ T-cell clone PL-1, EBV transformed B cell lines, the pro-monocytic cell line U937, and/or resting and activated peripheral blood monocytes. The monoclonal antibody may specifically recognize an epitope on the extracellular domain of receptor protein 4-1BB. Also provided are hybridomas capable of producing the monoclonal antibodies of the invention.